



SHOWCASE PROJECT: OREGON DEPARTMENT OF CORRECTIONS—50001 READY

SOLUTION OVERVIEW

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The Oregon Department of Corrections (DOC) is committed to energy efficiency as a sustainable means to lower emissions, lead by example, and reduce the cost of operations. Oregon DOC has worked with the Energy Trust of Oregon's strategic energy management (SEM) program for the last six years, developing strong energy policies and goals, encouraging staff to find new ways to save energy, and prioritizing investments to decrease energy demands. Oregon DOC uses EPA's Portfolio Manager to track energy consumption and set performance benchmarks. Its facilities submit monthly reports on their contributions toward Oregon DOC's 2023 goal to reduce energy use by 20%. The DOC also regularly submits energy usage reports to the Oregon Department of Energy.

"Like other correctional facilities, we operate much like a small city; despite the wide variety of functions, 50001 Ready helps us improve our energy management and accelerate progress toward our energy goals."

*—Chad Naugle, Sustainability Manager
Oregon Dept. of Corrections*

The Oregon Department of Corrections is the first agency of its type to earn 50001 Ready recognition from the U.S. Department of Energy (DOE). Collectively, the six facilities that have earned the designation include over 63 buildings serving diverse functions, such as administration, housing, textile manufacturing, warehousing, refrigeration, food preparation, education, recreation, religious services, laundry, and medical assistance. Two correctional facilities achieved 50001 Ready status for the first time in 2019:

- Powder River Correctional Facility, Baker City; Oct.
- Shutter Creek Correctional Facility, North Bend; Aug.

Additionally, four sites that originally self-attested in 2018 re-attested in 2019, **observing improvements of 6.5% in electricity, 23% in gas, and 13% in geothermal consumption over the previous year.**

- Coffee Creek Correctional Facility, Wilsonville; Dec. 2018
- Central Distribution Center, Salem; Nov. 2018
- Warner Creek Correctional Facility, Lakeview; Nov. 2018
- Eastern Oregon Correctional Inst., Pendleton; Sept. 2018

SECTOR TYPE

Commercial

LOCATION

Baker City, Oregon

SOLUTIONS

Oregon DOC exceeded its initial 50001 Ready goal of four facilities attaining 50001 Ready status in just one year (2018)—and then added two more facilities in 2019. Oregon DOC is leveraging the multi-site features of DOE's online 50001 Ready Navigator tool to centrally track all 15 of its facilities. By accessing the Navigator's multi-site dashboard, the Sustainability Manager can easily monitor and manage progress at all sites, including any site-specific energy management activities. This functionality helps to inform monthly reports and meeting discussions, while reinforcing and further motivating each facility.

Regular updates on energy savings and progress toward goals have elevated the energy awareness of staff and adults in custody at each site. Many now engage in friendly competitions to find new ways to save energy.

The Powder River and Shutter Creek facilities, which first attained 50001 Ready recognition in 2019, followed a similar process set by earlier Oregon DOC 50001 Ready facilities. Building upon their success with the Energy Trust of Oregon's Strategic Energy Management (SEM) data-driven approach to performance improvement, the team employed 50001 Ready's tools and resources to amplify these efforts. Recently, the team introduced a process for the implementation of standard operating procedure templates for each major piece of equipment. Starting with their HVAC units, they discovered that many coils had not been cleaned for some time, causing the units to run at efficiencies as low as 20%. After cleaning, the units ran at around 70% efficiency. These processes are being replicated across each facility, bringing them closer to their 20% energy reduction goal by 2023.

"50001 Ready is becoming the standard for getting our prisons focused on energy management and taking it to the next level. The 50001 Ready process provides us a means to control and reduce our agency's energy consumption, carbon emissions, and costs. It's an opportunity to educate staff and adults in custody on the importance of changing behaviors around the conservation of energy and water."

*—Chad Naugle, Sustainability Manager
Oregon Dept. of Corrections*

Implementing a 50001 Ready Energy Management System

- Oregon DOC leveraged its use of EPA's Portfolio Manager for their 50001 Ready energy consumption reporting. [Note: The 50001 Ready Energy Reporting Template for Portfolio Manager can be downloaded directly; ENERGY STAR Energy Performance Indicator reports

may also be submitted.]

- Engaging multiple sites allows the facilities to share experiences, learn from each other, lend expertise for training, and quickly build on successes. Powder River completed all 50001 Ready tasks in just seven months, and Shutter Creek required only three months.
- Working with Energy Trust of Oregon accelerated attainment of 50001 Ready status because much of the groundwork was already in place (e.g., policy, goals, tracking and reporting procedures, energy teams, and management support).
- Engaging both Oregon DOC staff and adults in custody helps to identify additional opportunities for energy savings:
 1. Monthly posting of energy efficiency levels helps security staff understand the importance of conserving energy.
 2. Adults in custody serve as extra eyes and ears and are often the first to hear and report something unusual with the equipment (e.g., rooftop air handlers clanking at night).
 3. Some adults in custody, such as clerks with access to the maintenance management software, help implement and document energy management procedures (e.g., run analyses and pull data from the system for use in reports or in equipment and controls checklists).
- The four facilities that renewed their 50001 Ready designation in 2019 just had to re-attest to their continual support of their EnMS and submit an annual energy performance improvement report. After the first attestation, an organization may re-attest in the two consecutive years immediately following the initial attestation. The third year necessitates a full attestation process that includes confirming the completion of the 25 Navigator tasks, plus the submission of an attestation form and the last 12 months of energy data.
- Guidance provided by the 50001 Ready Navigator encouraged a closer analysis of the equipment to identify further energy savings. In some cases, mapping timelines for equipment usage helped automate efficient scheduling (e.g., turning off HVAC equipment when buildings are not in use).
- Quarterly energy savings across Oregon DOC's facilities are shared with interested prison systems nationwide to stimulate discussion and encourage adoption of energy management strategies. Oregon DOC Sustainability Manager Chad Naugle shared its energy management successes at a large SEM event in Portland, Oregon; he continues to respond to inquiries and speaking requests from state agencies around the country. This national attention has strengthened senior management support for expanding the program to additional facilities.

[The Oregon Department of Corrections has successfully applied their learnings from Strategic Energy Management within their organization to the more formalized goal for 50001 Ready.](https://betterbuildingssolutioncenter.energy.gov/iso-50001/showcase-projects/oregon-department-corrections%E2%80%99s-50001-ready)

—Kathleen Belkhat, Energy Trust of Oregon

Key Takeaways

Modeling good stewardship of energy resources sets an example for other state institutions and opens up opportunities for adults in custody to get involved and learn useful skills valued by the broader community.

Aggressive energy management goals helped Oregon DOC gain recognition as a leader and role model for other prison systems. 50001 Ready recognition helps to underscore Oregon DOC's energy and sustainability practices.

Oregon DOC is using the multi-site Navigator function to familiarize all facilities with its energy management systems, track and show progress, and engage facilities when it's time to achieve (or re-attest to) 50001 Ready recognition.

OTHER BENEFITS

50001 Ready Multi-Site Advantages

50001 Ready supports multi-site deployment in key ways:

- Gives sites access to centralized resources/expertise
- Expedites completion of Navigator steps at each site
- Simplifies management monitoring and control of energy usage through a dashboard

Annual Energy Use

Annual Energy Cost

Energy Savings

Cost Savings



Eastern Oregon Correctional Institution (EOCI) contains 1,682 beds, a garment factory and commercial laundry facility. Photo: Communications Office, Oregon Department of Corrections